

- Figure 6a represents, in perspective, an exchanger according to the invention which includes the main module forming a main exchanger, as well as an auxiliary module forming an auxiliary exchanger;

- Figure 6b represents a refrigerant-fluid collector corresponding to Figure 6a, Figures 6c and 6d illustrate a preferred variant of this collector, which incorporates a bottle of refrigerant fluid;

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- Figure 7a represents a variant of the exchanger of Figure 6a, and Figure 7^b/_d represents the refrigerant-fluid collector of the exchanger of Figure 7a.

Description of the preferred embodiments

The invention applies more particularly to heating/air-conditioning apparatus which exhibits a mixing flap on the air.

The basic idea of the present invention is thus to use a heat-carrying fluid/air/refrigerant-fluid exchanger which fulfils respectively the roles of gas cooler or of radiator on the basis of the operating modes chosen. In the case of a "conventional" thermal loop, the gaseous refrigerant fluid is condensed in the gas cooler which constitutes a condenser. In the case of a thermal loop operating in what is known as "supercritical" mode, the gaseous refrigerant fluid, for example CO₂, is simply cooled in the gas cooler.

The rest of the invention relates, in a nonlimiting way, to the case of a conventional thermal loop, which employs a condenser and in which the heat-carrying fluid is water.

The first embodiment described in Figures 1a to 1d makes it possible to give maximum preference to the exchange between water tubes and refrigerant-fluid tubes. As Figure 1a shows, a water-circulation element referenced 2 is arranged between two